

## **E. Listing Of Claims**

The following listing of claims will replace all prior listings of claims in this application.

49. (New) A multi-position reclining bed comprising:

- 5           a. A plurality of supporting elements comprising:
  - i. A back section;
  - ii. A buttocks section;
  - iii. A thigh section;
  - iv. A calves section;
- 10          b. Wherein the supporting elements are configured to support a plurality of mattress elements;
- c. A track coupled to the supporting elements;
- d. A linear actuator coupled to the supporting elements;
- e. Wherein the back section is coupled to the track section and configured to move
- 15           an end portion thereof vertically when the linear actuator is activated;
- f. Wherein the thigh section and calves section are configurable into a locked
- position to form a single acting rigid coplanar leg section that reclines pivotally
- below a horizontal plane of the buttocks section in a downward direction pivotally
- about an adjoining edge with the buttocks section.
- 20   50. (New) The multi-position reclining bed of claim 49 wherein the thigh section and calves
- section are configurable into a locked position utilizing lock springs, in an elongated state,
- that force a transfer link to remain in an over centered locked position.

51. (New) The multi-position reclining bed of claim 49 wherein the buttocks section is capable of pivoting in an upward direction about the bottom edge of the back section.
52. (New) The multi-position reclining bed of claim 51, wherein the lower edge of the buttocks section is capable of elevating in an upwards direction.
- 5 53. (New) The multi-position reclining bed of claim 52, further comprising a plurality of arm rests.
54. (New) The multi-position reclining bed of claim 49, further comprising a swing arm attached to any of the supporting elements.
55. (New) The multi-position reclining bed of claim 54, wherein the armrest is attached to a  
10 swing arm.
56. (New) The multi-position reclining bed of claim 54, wherein the armrest is capable of pivoting substantially horizontally to a position over the bed.
57. (New) The multi-position reclining bed of claim 54, wherein the swing arm is capable of locking into position utilizing a swivel lock.
- 15 58. (New) The multi-position reclining bed of claim 54, further comprising a desk attached to the swing arm.
59. (New) The multi-position reclining bed of claim 54, further comprising electrical and data connections, wherein the electrical and data connections are secured to the swing arm such that they are accessible to the occupant of the bed.
- 20 60. (New) The multi-position reclining bed of claim 59, wherein the data connection is capable of providing an internet and/or telephone connection.
61. (New) The multi-position reclining bed of claim 49, further comprising a plurality of the following elements:

- a. Pivot fixtures;
- b. Connecting bars;
- c. Transfer links;
- d. Projections;
- 5 e. Stops; and
- f. Lock springs

62. (New) The multi-position reclining bed of claim 61, wherein the pivot fixture is pivotally connected between the buttocks section and the thigh section.

10 63. (New) The multi-position reclining bed of claim 61, wherein the transfer link has a plurality of pivot points, including a lower transfer link pivot point that is connected to the linear actuator, a foot end pivot that is pivotally connected to the connecting bar and to the opposite end of the connecting bar, and a pivot point that is pivotally connected to the feet elevating mechanism.

15 64. (New) The multi-position reclining bed of claim 61, wherein the pivot of the transfer link is located between the lower pivot and the foot end pivot.

65. (New) The multi-position reclining bed of claim 61, wherein the transfer link is pivotally connected to the feet elevating mechanism.

66. (New) The multi-position reclining bed of claim 61, wherein the transfer link is pivotally connected to the pivot fixture.

20 67. (New) The multi-position reclining bed of claim 61, wherein while the thigh section and the calves section are reclined below horizontal, the force of foot ward motion of the linear actuator on the lower transfer link pivot point causes upward rotation of the following elements in an upward direction about the distal end pivot of the pivot fixture until the

projection of the pivot fixture engages the stop secured to the thigh section at a substantially horizontal position:

- a. The pivot fixture;
- b. The calves section;
- 5 c. The thigh section; and
- d. The feet elevating mechanism

68. (New) The multi-position reclining bed of claim 61, wherein the foot ward motion of the linear actuator results in rotation of the transfer link about the transfer link fixture pivot, causing lifting of the following sections from resting points on the pivot fixture, the calves  
10 section, and the stop, while elongating the lock spring:

- a. The thigh section;
- b. The calves section; and
- c. The feet elevating mechanism

69. (New) The multi-position reclining bed of claim 63, wherein the lower transfer link pivot is  
15 located along the pivot fixture.

70. (New) The multi-position reclining bed of claim 69, wherein the linear actuator and the buttocks section form a double bar linkage resulting in substantially minor vertical movement of the lower edge of the calves section of the coplanar leg section as the buttocks section is reclined.

20 71. (New) The multi-position reclining bed of claim 50, further comprising a box spring having a reduced thickness at the lower edge of the calves section.

72. (New) The multi-position reclining bed of claim 71, further comprising

- a. Fabric material;

- b. Peripheral frame; and
- c. A peripheral frame spring

73. (New) The multi-position reclining bed of claim 72, wherein the fabric material encloses the frame elements.

5 74. (New) The multi-position reclining bed of claim 72, wherein the peripheral frame

- a. Pivots at distal end pivots;
- b. Forms the lower edge of the foot end of the bed; and
- c. Forms both sides of the bed below the surface of the calves section and/or the thigh section.

10 75. (New) The multi-position reclining bed of claim 72, wherein the peripheral frame spring elongates when it is rotated below the horizontal position about the distal end pivot.

76. (New) The multi-position reclining bed of claim 72, further comprising a plurality of cams and cam followers.

15 77. (New) The multi-position reclining bed of claim 76, wherein the cam contour controls the elevation position of the peripheral frame.

78. (New) The multi-position reclining bed of claim 77 wherein the peripheral frame is capable of elevating the calves section above the thigh and buttocks section.

79. (New) The multi-position reclining bed of claim 49, wherein the mattress elements comprise surfaces with differing frictional coefficients.

20 80. (New) The multi-position reclining bed of claim 71, further comprising a releasable mechanical holding device that secures the mattress element to the box spring.

81. (New) The multi-position reclining bed of claim 80, wherein the releasable mechanical holding device is located at a sufficient distance from the perimeter of the mattress and box

spring to avoid interference with the placement of sheets and/or other bedding materials around the width of the mattress.

82. (New) The multi-position reclining bed of claim 80, wherein the releasable mechanical holding device comprises a barb and loop fastening arrangement.

5 83. (New) The multi-position reclining bed of claim 49, further comprising

- a. A threaded coupling half;
- b. A fixed coupling half;
- c. A bearing; and
- d. A thread spring

10 84. (New) The multi-position reclining bed of claim 83, wherein the coupling disengages during reclining motion by action of rotating a thread that separates the threaded coupling half from the fixed coupling half.

85. (New) The multi-position reclining bed of claim 84, wherein the rotation of the thread is along the axis of the thread against compression force of the thread spring whereby free  
15 rotation of the threaded coupling half on the thread prevents further movement along the length of the thread.

86. (New) The multi-position reclining bed of claim 49, further comprising a four section non-wall-hugging reclining bed.

87. (New) The multi-position reclining bed of claim 53 or 57, further comprising an attached  
20 armrest, swing arm, and variable position swivel lock.

88. (New) The multi-position reclining bed of claim 49, further comprising a footrest located at the bottom of the calves section.

89. (New) The multi-position reclining bed of claim 54, further comprising a buttocks sling secured to the arm rest that allows the occupant's buttocks to be raised, relative to the buttocks section of the bed, by lowering the buttocks section while the sling is supporting the weight of the occupant.

5 90. (New) The multi-position reclining bed of claim 49, further comprising a powered mechanism located behind the back section, that is capable of causing a protrusion of the back section of the mattress.

91. (New) The multi-position reclining bed of claim 54, further comprising a desk attached to the bed, the desk capable of supporting written material.

10 92. (New) A multi-position reclining bed comprising:

a. A plurality of supporting elements comprising:

i. A back section;

ii. A buttocks section;

iii. A thigh section;

15 iv. A calves section;

b. Wherein the supporting elements are configured to support a plurality of mattress elements;

c. A track coupled to the supporting elements;

d. A linear actuator coupled to the supporting elements;

20 e. Wherein the thigh section and calves section are configurable into a locked position to form a single acting rigid coplanar leg section that reclines pivotally below a horizontal plane of the buttocks section in a downward direction pivotally about an adjoining edge with the buttocks section.

93. (New) The multi-position reclining bed of claim 92, wherein the buttocks section is capable of reclining pivotally in an upward direction about its adjoining edge of the back section, when the lower edge of the buttocks section is elevated.
- 5 94. (New) The multi-position reclining bed of claim 93, further comprising a plurality of arm rests.
95. (New) The multi-position reclining bed of claim 93, further comprising a swing arm attached to any of the supporting elements.
96. (New) The multi-position reclining bed of claim 93, wherein the arm rest is attached to a swing arm.
- 10 97. (New) The multi-position reclining bed of claim 93, wherein the arm rest is capable of pivoting substantially horizontally to a position over the bed.
98. (New) The multi-position reclining bed of claim 93, wherein the swing arm is capable of locking into position utilizing a swivel lock.
99. (New) The multi-position reclining bed of claim 93, further comprising a desk attached to  
15 the swing arm.
100. (New) The multi-position reclining bed of claim 93, further comprising a plurality of linear actuators capable of raising the calve and thigh sections above the horizontal.
101. (New) The multi-position reclining bed of claim 100, wherein the calve and thigh sections are capable of locking in a coplanar arrangement.